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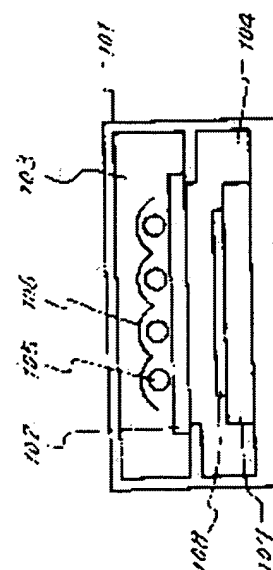
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(54) MANUFACTURE OF SEMICONDUCTOR DEVICE

(57)Abstract:

PURPOSE: To obtain a film, quality thereof is uniform and the state of the interface thereof is excellent, by keeping a semiconductor substrate under pressure of one atmosphere pressure or lower and irradiating ultraviolet beams having a wavelength of 3,000 μ m or less to purify the surface of the substrate and immediately applying a film without exposing the substrate in atmospheric air when an insulating film or the semiconductor film is applied on the substrate.

CONSTITUTION: A chamber 101 is partitioned into a substrate chamber 104 and a lamp chamber 103 by a synthetic quartz board 102, and a semiconductor substrate 108, on the surface thereof an insulating film or a semiconductor film is to be formed, is received into the substrate chamber 104 through a susceptor 107. Lamps 105 emitting ultraviolet beams are disposed into the lamp chamber 103 while upper surfaces are covered with a mirror 106. Pressure in the chamber 101 is decompressed up to 10⁻¹W10⁻²Torr, ultraviolet beams are projected to the surface of the substrate 108 to purify the surface, and the substrate is shifted into a film growth device without being exposed to atmospheric air. The effect of purification is further improved when infrared beams by a laser light source are irradiated at the same time with the ultraviolet beams or alternately by the two beams.



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